

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A text sentence comparison method comprising:
converting a first text sentence and a second text sentence into a first R tree and a second R tree, respectively;
calculating a distance between the first R tree and the second R tree based on ~~the basis of~~ a distance between two R trees, which is defined at least in accordance with a condition of a mapping between vertexes and edges of the two R trees; and
calculating a distance between the first text sentence and the second text sentence based on ~~the basis of the calculated~~ distance between the first R tree and the second R tree, wherein:
~~in the conversion,~~
word information contained in the first text sentence are allotted to the vertexes of the first R tree;
word information contained in the second text sentence are allotted to the vertexes of the second R tree;
case information contained in the first text sentence are allotted to ~~the~~ edges of the first R tree; and
case information contained in the second text sentence are allotted to ~~the~~ edges of the second R tree.
2. (Currently Amended) The text sentence comparison method according to claim 1, ~~wherein in the calculation of~~ calculating the distance between the first R tree and the second R ~~tree~~ tree comprising:

calculating a mapping weight of a mapping from the first R tree to the second R tree;

calculating a distance between a first forest, which the first R tree includes, and a second forest, which the second R tree ~~include;~~ includes; and

calculating a distance between a first subtree, which the first R tree includes, and a second subtree, which the second R tree ~~includes;~~ includes.

~~are calculated.~~

3. (Currently Amended) The text sentence comparison method according to claim 2, wherein:

the mapping weight is calculated based on ~~the basis of~~ a word substitution weight, a word deletion weight, a word insertion weight, a case substitution weight, a case deletion weight, and a case insertion weight.

4. (Currently Amended) The text sentence comparison method according to claim 1, further comprising:

setting the condition of the mapping between the ~~first and second~~ vertexes and edges of the two R trees.

5. (Currently Amended) The text sentence comparison method according to claim 1, wherein the condition of the mapping between the ~~first and second~~ vertexes and edges of the two R trees includes:

the mapping is a one-to-one mapping;

the mapping preserves parent-child relationship;

the mapping preserves structure; and

the mapping between the vertexes does not intersect with the mapping between the edges.

6. (Currently Amended) The text sentence comparison method according to claim 1, further comprising:

inputting the first text sentence and the second text sentence; and

outputting the ~~calculated~~ distance between the first text sentence and the second text sentence.

7. (Currently Amended) A text sentence comparison method comprising:

converting a first text sentence and a second text sentence into a first RO tree and a second RO tree, respectively;

calculating a distance between the first RO tree and the second RO tree based on ~~the basis of~~ a distance between two RO trees, which is defined at least in accordance with a condition of a mapping between vertexes and edges of the two RO trees; and

calculating a distance between the first text sentence and the second text sentence based on ~~the basis of~~ the ~~calculated~~ distance between the first RO tree and the second RO tree, ~~wherein~~ wherein

~~in the conversion,~~

word information contained in the first text sentence are allotted to ~~the~~ vertexes of the first RO tree;

word information contained in the second text sentence are allotted to ~~the~~ vertexes of the second RO tree;

case information contained in the first text sentence are allotted to ~~the~~ edges of the first RO tree; and

case information contained in the second text sentence are allotted to ~~the~~ edges of the second RO tree.

8. (Currently Amended) The text sentence comparison method according to claim 7, ~~wherein calculating in the calculation of~~ the distance between the first RO tree and the second RO ~~tree;~~ tree comprising:

calculating a mapping weight of a mapping from the first RO tree to the second RO tree;

calculating a distance between a first forest, which the first RO tree includes, and a second forest, which the second RO tree include; and

calculating a distance between a first subtree, which the first RO tree includes, and a second subtree, which the second RO tree ~~includes;~~ includes.

~~_____are calculated.~~

9. (Currently Amended) The text sentence comparison method according to claim 8, wherein:

the mapping weight is calculated based on ~~the basis of~~ a word substitution weight, a word deletion weight, a word insertion weight, a case substitution weight, a case deletion weight, and a case insertion weight.

10. (Currently Amended) The text sentence comparison method according to claim 7, further comprising:

setting the condition of the mapping between the ~~first and second~~ vertexes and edges of the two RO trees.

11. (Currently Amended) The text sentence comparison method according to claim 7, wherein the condition of the mapping between the ~~first and second~~ vertexes and edges of the two RO trees includes:

the mapping is a one-to-one mapping;

the mapping preserves parent-child relationship;

the mapping preserves brother relationship;

the mapping preserves structure; and
the mapping between the vertexes does not intersect with the mapping
between the edges.

12. (Currently Amended) The text sentence comparison method according to
claim 7, further comprising:

inputting the first text sentence and the second text sentence; and
outputting the ~~calculated~~ distance between the first text sentence and the
second text sentence.

13. (Currently Amended) A text sentence comparison apparatus comprising:
an input section for inputting a first text sentence and a second text sentence;
a tree structure conversion section for converting the first text sentence and the
second text sentence into a first R tree and a second R tree, respectively;

a distance calculation section for calculating a distance between the first R tree
and the second R tree based on ~~the basis of~~ a distance between two R trees, which is defined
at least in accordance with a condition of a mapping between vertexes and edges of the two R
trees; and

a semantic content comparison section for calculating a distance between the
first text sentence and the second text sentence based on ~~the basis of~~
the ~~calculated~~ distance between the first R tree and the second R tree, wherein:

the tree structure conversion section allots:
word information contained in the first text sentence to the vertexes of the first
R tree;
word information contained in the second text sentence to the vertexes of the
second R tree;

case information contained in the first text sentence to the edges of the first R tree; and

case information contained in the second text sentence to the edges of the second R tree.

14. (Currently Amended) The text sentence comparison apparatus according to claim 13, wherein the distance calculation section calculates:

a mapping weight of a mapping from the first R tree to the second R tree,

a distance between a first forest, which the first R tree includes, and a second forest, which the second R tree ~~include~~, includes, and

a distance between a first subtree, which the first R tree includes, and a second subtree, which the second R tree includes.

15. (Currently Amended) The text sentence comparison ~~method~~-apparatus according to claim 14, wherein:

the distance calculation section calculates the mapping weight based on the ~~basis of~~ a word substitution weight, a word deletion weight, a word insertion weight, a case substitution weight, a case deletion weight, and a case insertion weight.

16. (Currently Amended) The text sentence comparison ~~method~~-apparatus according to claim 13, further comprising:

a setting input section for allowing a user to set the condition of the mapping between the first and second vertexes and edges of the two R trees.

17. (Currently Amended) The text sentence comparison ~~method~~-apparatus according to claim 13, wherein the condition of the mapping between the first and second vertexes and edges of the two R trees includes:

the mapping is a one-to-one mapping;

the mapping preserves parent-child relationship;

the mapping preserves structure; and

the mapping between the vertexes does not intersect with the mapping between the edges.

18. (Currently Amended) The text sentence comparison ~~method~~-apparatus according to claim 13, further comprising:

an output section for outputting the ~~calculated~~-distance between the first text sentence and the second text sentence.

19. (Currently Amended) A text sentence comparison apparatus comprising:

an input section for inputting a first text sentence and a second text sentence;

a tree structure conversion section for converting the first text sentence and the second text sentence into a first RO tree and a second RO tree, respectively;

a distance calculation section for calculating a distance between the first RO tree and the second RO tree based on ~~the basis of~~ a distance between two RO trees, which is defined at least in accordance with a condition of a mapping between vertexes and edges of the two RO trees; and

a semantic content comparison section for calculating a distance between the first text sentence and the second text sentence based on ~~the basis of~~ the ~~calculated~~-distance between the first RO tree and the second RO tree, ~~wherein~~:wherein

the tree structure conversion section allots:

word information contained in the first text sentence to ~~the~~-vertexes of the first RO tree;

word information contained in the second text sentence to ~~the~~-vertexes of the second RO tree;

case information contained in the first text sentence to ~~the~~-edges of the first RO tree; and

case information contained in the second text sentence to ~~the~~ edges of the second RO tree.

20. (Currently Amended) The text sentence comparison apparatus according to claim 19, wherein the distance calculation section calculates:

a mapping weight of a mapping from the first RO tree to the second RO tree,

a distance between a first forest, which the first RO tree includes, and a second forest, which the second RO tree ~~include~~, includes, and a distance between a first subtree, which the first RO tree includes, and a second subtree, which the second RO tree includes.

21. (Currently Amended) The text sentence comparison ~~method~~ apparatus according to claim 19, wherein:

the distance calculation section calculates the mapping weight based on ~~the basis of~~ a word substitution weight, a word deletion weight, a word insertion weight, a case substitution weight, a case deletion weight, and a case insertion weight.

22. (Currently Amended) The text sentence comparison ~~method~~ apparatus according to claim 19, further comprising:

a setting input section for allowing a user to set the condition of the mapping between the first and second vertexes and edges of the two RO trees.

23. (Currently Amended) The text sentence comparison ~~method~~ apparatus according to claim 19, wherein the condition of the mapping between the first and second R vertexes and edges of the two RO trees includes:

the mapping is a one-to-one mapping;

the mapping preserves parent-child relationship;

the mapping preserves brother relationship;

the mapping preserves structure; and

the mapping between the vertexes does not intersect with the mapping between the edges.

24. (Currently Amended) The text sentence comparison ~~method~~apparatus according to claim 19, further comprising:

an output section for outputting the ~~calculated~~ distance between the first text sentence and the second text sentence.

25. (New) The text sentence comparison method according to claim 1, wherein the distance between the first text sentence and the second text sentence = (the distance between the first R tree and the second R tree)/(a sum of vertexes of the first R tree and vertexes of the second R tree).

26. (New) The text sentence comparison method according to claim 7, wherein the distance between the first text sentence and the second text sentence = (the distance between the first RO tree and the second RO tree)/(a sum of vertexes of the first RO tree and vertexes of the second RO tree).

27. (New) The text sentence comparison ~~method~~apparatus according to claim 13, wherein

the distance between the first text sentence and the second text sentence = (the distance between the first R tree and the second R tree)/(a sum of vertexes of the first R tree and vertexes of the second R tree).

28. (New) The text sentence comparison ~~method~~apparatus according to claim 19, wherein

the distance between the first text sentence and the second text sentence = (the distance between the first RO tree and the second RO tree)/(a sum of vertexes of the first RO tree and vertexes of the second RO tree).